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ABSTRACT

This study was begun in the Fall of 1985 to determine the long-term effects of retention in one of the six COOR Intermediate School District Areas (Roscommon, Michigan). The major focus is on academic achievement as measured by the California Achievement (CA) Test, which has been given to every kindergarten through eighth grade student in the Areas since 1980. Every student in the district was studied with the exception of students in grade 12. The district studied is comprised of two elementary schools, two middle schools, and one high school. The total population consisted of 2,800 students. Data analyzed included the following: (1) sex; (2) age; (3) retention; (4) free or reduced lunch; (5) CA Test information; (6) special education; (7) chapter services; and (8) ancillary information believed to be relevant. Conclusions include the following: (1) males are more likely to be retained and double retained than females; (2) retained males are more likely to receive special education services than females; (3) analysis of the CA scores of 166 students retained in the first, second, and third grades indicates that there is little long-term benefit from retention; (4) retained males and females do not achieve differently after retention; (5) non-retained students perform academically better than retained students; (6) non-retained students perform academically better on the average over time than do retained students; and (7) retained students are more likely to be economically disadvantaged. The appendix is comprised of nine statistical data on nine tables and 11 graphs. (FMW)

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A LONGITUDINAL STUDY OF RETENTION IN THE C.O.O.R. ISD AREA

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18 January, 1989

UD026648

C.O.O.R. ISD

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COOR ISD RETENTION STUDIES

BACKGROUND

A study was begun in the fall of 1985 to determine the long term effects of retention in one of COOR's six districts. The need for such an investigation became apparent as studies of the dropouts of two districts produced data that indicated students who left school permanently prior to graduation were more likely to have been retained and/or had received special education services.

In the Crawford Ausable District for instance, of 112 high school dropouts over seven years, 71 had left school by the end of the 10th grade, 44 of whom had been retained (6 twice) and 37 had received special education services. In addition, these 71 students had exit Grade Point Averages of 0.68 in the 9th grade and 1.43 in the 10th and left school at the average age of 17.02 years.

While the literature is replete with studies concerning retention, there are basically two positions: one stipulates that there is little evidence to suggest that retention is beneficial or harmful and that most studies on the subject have no or few controls. The other position suggest that retention is harmful without question.

It was determined that a longitudinal and on-going study of retention in the COOR area could provide information that would be useful to our districts. The major focus of the study was upon

academic achievement as measured by standardized achievement test data. It has been, and continues to be, the intention of this study to follow these students over time to determine the level of school success as measured by standardized outcome data. This criterion was chosen as the best indicator of academic success as grade reporting and anecdotal records were inconsistent and had no standardized format. The California Achievement Test has been given to every student K-8 in the COOR area since 1980 and this information is available in the students CA 60 folder along with other demographic and school data.

METHOD

The CA 60 of every child in the district was studied with the exception of students in the 12th grade. Within the district studied, there are two elementary schools, two middle schools and a high school, the total population being 2800 students. Data was taken as to sex, age, retention, free or reduced lunch, California test information, special education, chapter services and any other ancillary information believed to be relevant. The data for each child was inspected and placed into a computer file using Dbase III Plus software. Additional information was added during 1987 and 1988 that updated achievement scores and/or additional retentions.

SYNOPSIS OF RESULTS

Total Retention

From 1975 to 1986 there have been 326 retention in the district studied (TABLE I, page 10 and GRAPH I, page 11). Approximately 75% of retentions have occurred in the first three years of school; 18.7% in kindergarten, 41.1% in the first grade and 16% in the second grade. Subsequent grades exhibit a consistent decline in retentions to 0.6% in the sixth grade and then an increase in the seventh and eighth grades. Of the 326 retentions, 23 are double retentions.

Differences between the sexes can be noted as 64.1% of all retentions have been males. The ratio of retention of males to females is fairly consistent throughout the grades at two to one. For twice retained students the ratio of males to females is close to three males for every female. Further, of those who have been retained, 51 have or are in special education and 110 have received chapter services, (TABLE II, page 12). While males represent 64.2% of the retained population, 76.5% receiving special education services are males. The same is not true for retained students receiving chapter services where 66.4% of the 110 receiving chapter services are males.

Achievement

While data was collected for kindergarten through the eighth grade only grades K to four are reported here,(low numbers in grades 5 through eight). With each of the four grades listed, retention achievement scores are between the 34th and the 48th NCE for Reading, Language and Math, (TABLE III, page 13). Generally what scores have done is increased substantially the year after retention and then exhibit a consistent decline during successive years. The most dramatic rise and decline is exhibited by the 110 first graders with achievement scores increasing by better than 20 NCE points in the year of retention, declining by 10 in the second grade and an additional six to seven NCE points to 48 by the end of the fifth grade, (GRAPH II, III, IV and V, pages 14-17). Students retained in the second and third grades exhibit the same trend in initial rise and decline of scores, however the rise in achievement becomes less in the grade retained the higher the grade. Likewise, the subsequent decline in score becomes less until by the fourth grade there is an actual rise in scores in the second year after retention. It must be noted that with the exception of the first grade where initial and subsequent numbers are high, in grades three and four the subsequent student numbers for grades 6 and 7 are small which could account for the swings in data.

Scores for students who were retained in kindergarten were recorded

for only the first through third grades. For those 61 kindergarten students it can be noted that the scores exhibit a constant decline over time from first through the third grade, (TABLE IV, page 18). These scores are seen to decline from a total battery score of 56.8 NCE in the first grade to 45.5 NCE in the third grade, with reading dropping an average of 13 points in that time.

A total of 67 high school students in grades 9 through 11 are reported to have been retained, (TABLE V, page 19). The rate of retention follows closely the numbers per grade reported above for students grades K through 8. Of those retained, 13 were retained twice (11 males) bringing the total number of retentions to 80. Again, twice the number of males are reported retained (45) than females (22) with males having an average grade point of 1.59 and females 1.41. The grade point averages of all retained students averaged 1.53 with those retained in the seventh and eighth grades exhibiting the lowest averages (1.38). Twelve of the reported retained males out of 45 have special education services (26.7%) while only 4 out of the 22 females received the same (18.2%).

Achievement By Sex

In order to observe any achievement differences between males and females who have been retained, a comparative review was made by sex for those 110 K-8 students retained in the first grade, (TABLE VI and TABLE VII pages 20 and 22, GRAPH VI and GRAPH VII pages 21

and 23). It can be noted in TABLEs VI and VII that the reading and math achievement scores on the California do not differ between the sexes in the first few years after retention. For reading a difference appears to occur by the seventh grade and is maintained through the ninth. The same is true for math beginning in the eighth grade. However, numbers for the ninth grade are low.

A Comparison With Non-Retained Students

What was considered essential to this study of achievement was to compare those who had been retained with those who had not. It is agreed that not all is known as to the circumstances of those who have been retained in the district due in part to the lack of any concentric policy on retention and of any anecdotal information in the CAs. The same is true for those with whom the retained students were compared. The only factor was that the students chosen for the comparison were those first graders who from 1980 to 1986 had scored below the 50th NCE on the reading sub-test of the California Achievement Test and who have never been retained, (TABLE VIII, page 24 and GRAPHs VIII, XI, X and XI pages 25-28). It may be said that of those non-retained chosen for comparisons and selected for their low reading achievement score, 56 turned out to be females, 55 males.

Reading, language and math scores for the 110 students who have been retained in the first grade demonstrate significant rises

during the year of retention; 41.1 to 63.6 in reading and 44.9 to 67.8 in math. Declines in the second year after retention are 10.3 for reading to an average score of 53.3 and 11.3 for math for an average score of 56.5. These second grade scores are still, on the average, higher than those obtained by students not retained who achieved average scores of 47.7 in reading and 50.3 in math. It need be noted however that the non-retained students record scores all of which have increased. In fact, by the third grade and for each of the three academic areas tested, those who were not retained have scores that exceed those who have been retained: in reading 56.8 to 50.7, in language 61.4 to 52.0 and in math 56.0 to 50.7. For reading and language, the difference between the two groups in achievement score is maintained through the seventh grade. The difference in language achievement by the seventh grade is 10.4 NCE points and the difference in reading is 3.5 points. Only scores in math exhibit little or no differences with seventh grade scores being higher for the retained population by 4.4 NCE. Observed total battery scores are consistently higher for the non-retained for the third through the seventh grades.

Economic Considerations

Economic information is difficult to obtain for comparative purposes. What was done was to obtain the 1986 free and reduced hot lunch information on retained students as at least an indicative measure of economic status. The results were as

expected, that is a higher proportion of retained student received free or reduced hot lunch than did the total population, (TABLE IX, page 29). It was also apparent that the percentage differed from school to school. For the total district, K-8, of 1452 students 38.7% were on free or reduced lunch. Of the total retained, 48.5% were on free or reduced lunch indicating that those from lower economic strata were more likely to be retained. Differences between school were considerable with 14 of 19 retained students being on free or reduced lunch in one school (73.7%) while 26 out of 71 in another (36.6%) had been retained.

CONCLUSIONS

1. Males are more likely to be retained than females.
2. Males are more likely to be double retained than females.
3. Retained males are more likely to receive special education services than females.
4. Studies of the 166 students retained in the first, second and third grades indicate that when assessed by standardized achievement measures there is little long term benefit from retention.
5. Retained males and females do not achieve differently after retention.
6. Non-retained students fair academically better on the average over time than do retained students.
7. Students are more likely to be retained who are economically disadvantaged.

APPENDIX

TABLE I

COOR ISD RETENTION STUDIES

RETENTION BY GRADE AND SEX

1978 TO 1986

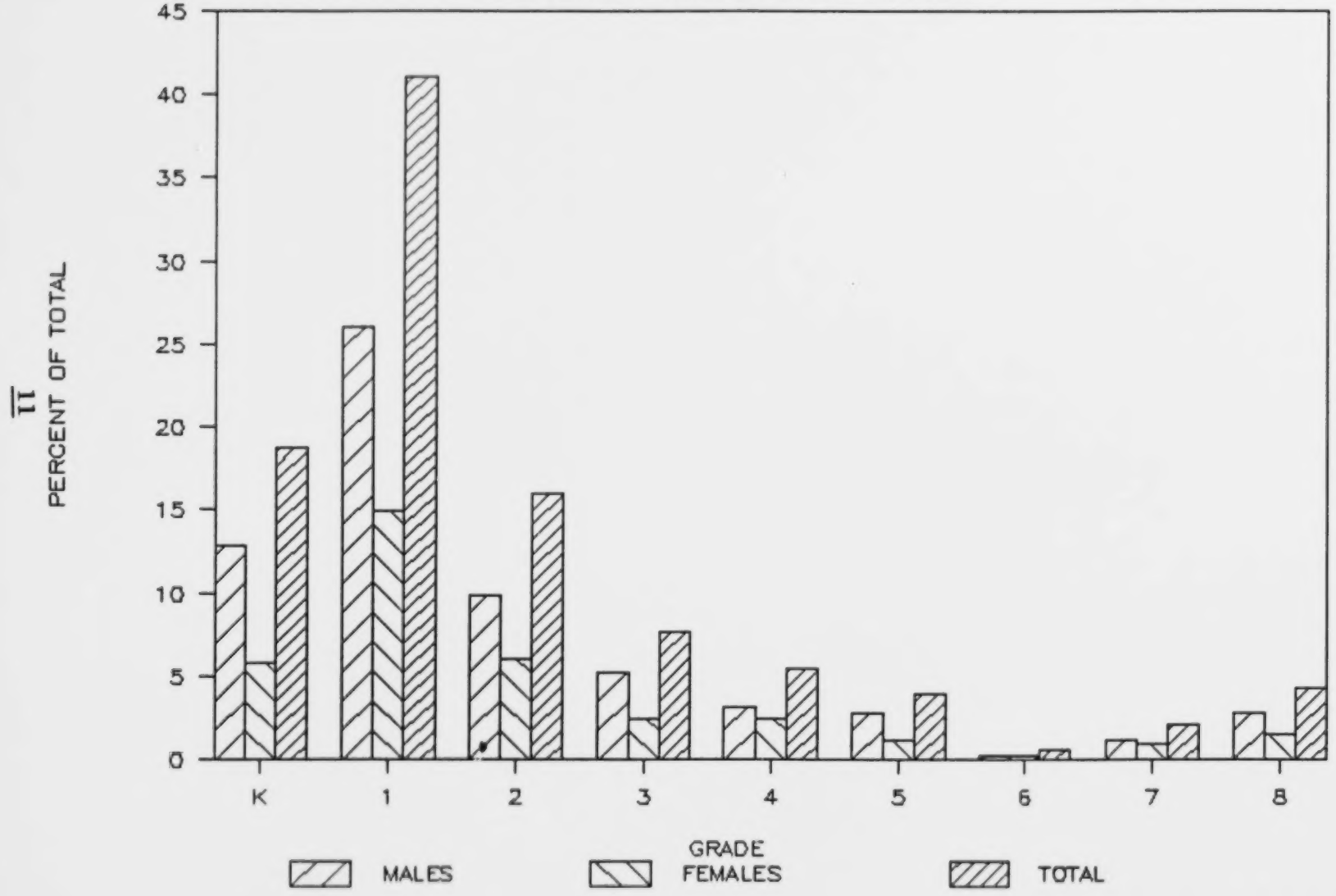
GRADE	MALES	PERCENT OF TOTAL	FEMALES	PERCENT OF TOTAL	TOTAL	PERCENT OF TOTAL
K	42	12.9	19	5.8	61	18.7
1	85	26.1	49	15.0	134	41.1
2	32	9.8	20	6.1	52	16.0
3	17	5.2	8	2.5	25	7.7
4	10	3.1	8	2.5	18	5.5
5	9	2.8	4	1.2	13	4.0
6	1	0.3	1	0.3	2	0.6
7	4	1.2	3	0.9	7	2.1
8	9	2.8	5	1.5	14	4.3
SUM	209	64.1	117	35.9	326	100.0

DOUBLE RETENTIONS

GRADE	MALES	FEMALES	TOTAL
K-1	1	1	2
K-2	2	0	2
K-5	3	0	3
K-8	1	1	2
1-2	0	1	1
1-6	1	1	2
1-8	4	0	4
2-7	1	1	2
2-8	0	1	1
3-8	2	0	2
4-5	1	0	1
5-8	1	0	1
SUM	17	6	23

RETENTIONS 1978 TO 1986

PERCENT OF TOTAL BY GRADE AND SEX



GRAPH I

TABLE II

COOR ISD RETENTION STUDIES
RETENTIONS FROM 1978 TO 1986

TOTAL DISTRICT

	GRADE NUMBER OF STUDENTS RETAINED										PERCENT OF TOTAL
	K	1	2	3	4	5	6	7	8	TOTAL	
MALES	42	85	32	17	10	9	1	4	9	209	64.1
SpEd	7	19	9	1	1	1	0	0	1	39	76.5
Chapt	13	24	9	7	4	5	1	2	8	73	66.4
FEMALE	19	49	20	8	8	4	1	3	5	117	35.9
SpEd	3	5	2	0	1	1	0	0	0	12	23.5
Chapt	4	16	6	2	3	2	0	3	1	37	33.6
TOTAL	61	134	52	25	18	13	2	7	14	326	
SpEd	10	24	11	1	2	2	0	0	1	51	
Chapt	17	40	15	9	7	7	1	5	9	110	

TABLE III

COOR ISD RETENTION STUDIES
ACHIEVEMENT OF RETAINED STUDENTS BY GRADE
CALIFORNIA ACHIEVEMENT TEST
AVERAGE NCE

FIRST GRADE RETENTIONS
n = 110

	GRADE									
	1	1R	2	3	4	5	6	7	8	9
READING	41.2	63.6	53.3	50.7	48.5	48.5	50.1	52.6	51.1	48.7
LANGUAGE			55.2	52.0	49.4	48.6	53.4	52.5	49.9	46.4
MATH	44.9	67.8	56.5	50.7	51.1	48.1	53.2	56.3	55.4	55.6
BATTERY	43.1	65.7	55.0	51.1	49.7	48.4	52.2	53.8	52.1	50.2

SECOND GRADE RETENTIONS
n = 51

	2	2R	3	4	5	6	7	8
READING	48.3	60.1	58.7	53.7	39.1	44.0	46.7	57.8
LANGUAGE	47.8	62.3	55.7	48.3	41.9	56.5	38.0	59.8
MATH	47.0	69.6	53.0	46.0	39.8	72.0	52.7	56.5
BATTERY	47.7	64.0	55.8	49.3	40.3	57.5	45.8	58.0

THIRD GRADE RETENTIONS
n = 25

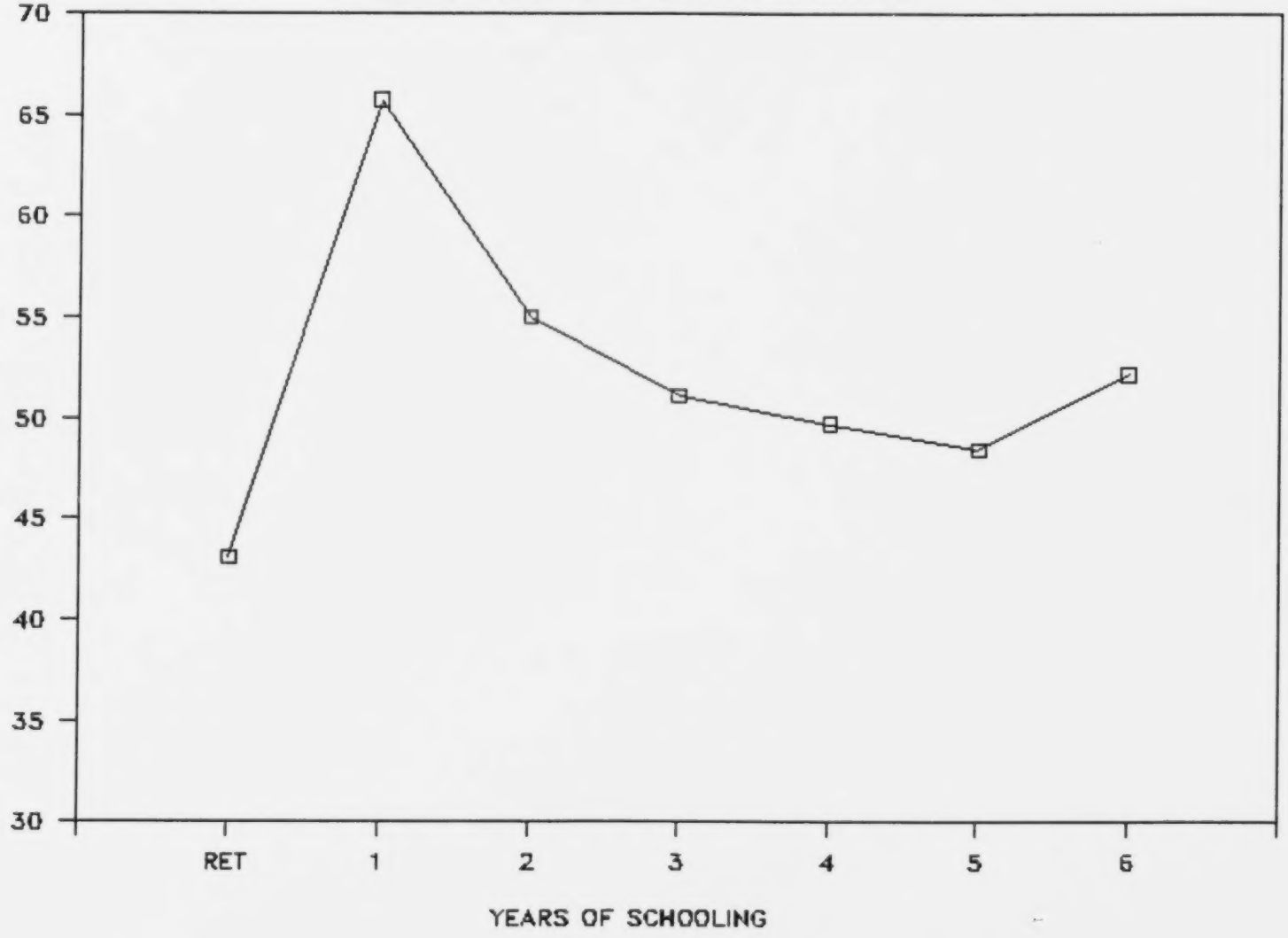
	3	3R	4	5	6
READING	42.9	52.9	55.7	40.8	67.0
LANGUAGE	39.7	69.1	54.7	55.0	48.3
MATH	40.9	53.6	53.2	47.0	50.7
BATTERY	41.2	58.5	54.5	47.6	55.3

FOURTH GRADE RETENTIONS
n = 18

	4	4R	5	6	7
READING	40.3	47.0	55.0	42.7	59.5
LANGUAGE	34.8	45.5	56.8	55.0	62.5
MATH	44.3	45.8	57.5	50.0	55.5
BATTERY	39.8	46.1	56.4	49.2	59.2

ACHIEVEMENT OF RETAINED STUDENTS

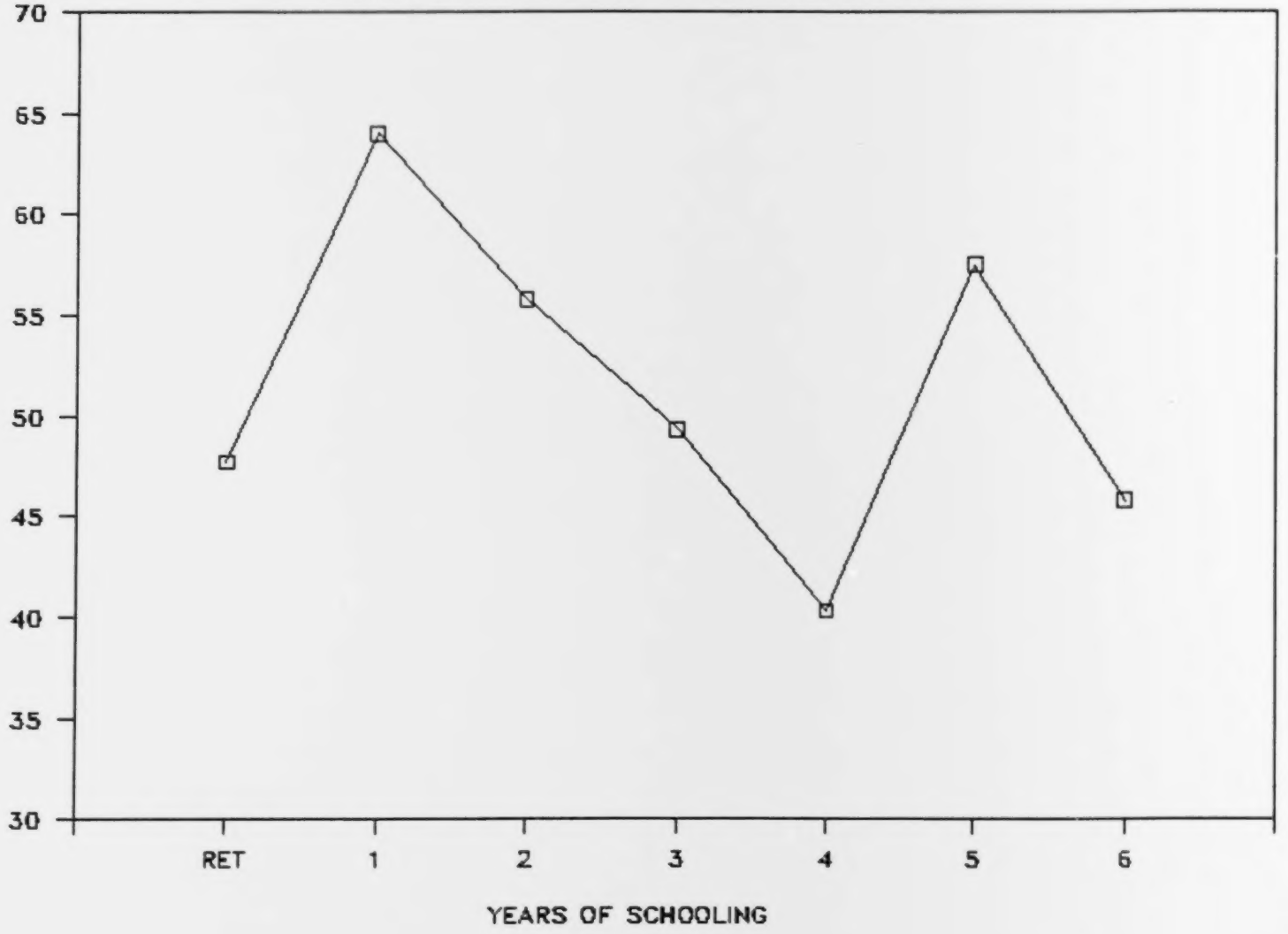
TOTAL BATTERY ACHIEVEMENT—FIRST GRADE



GRAPH II

ACHIEVEMENT OF RETAINED STUDENTS

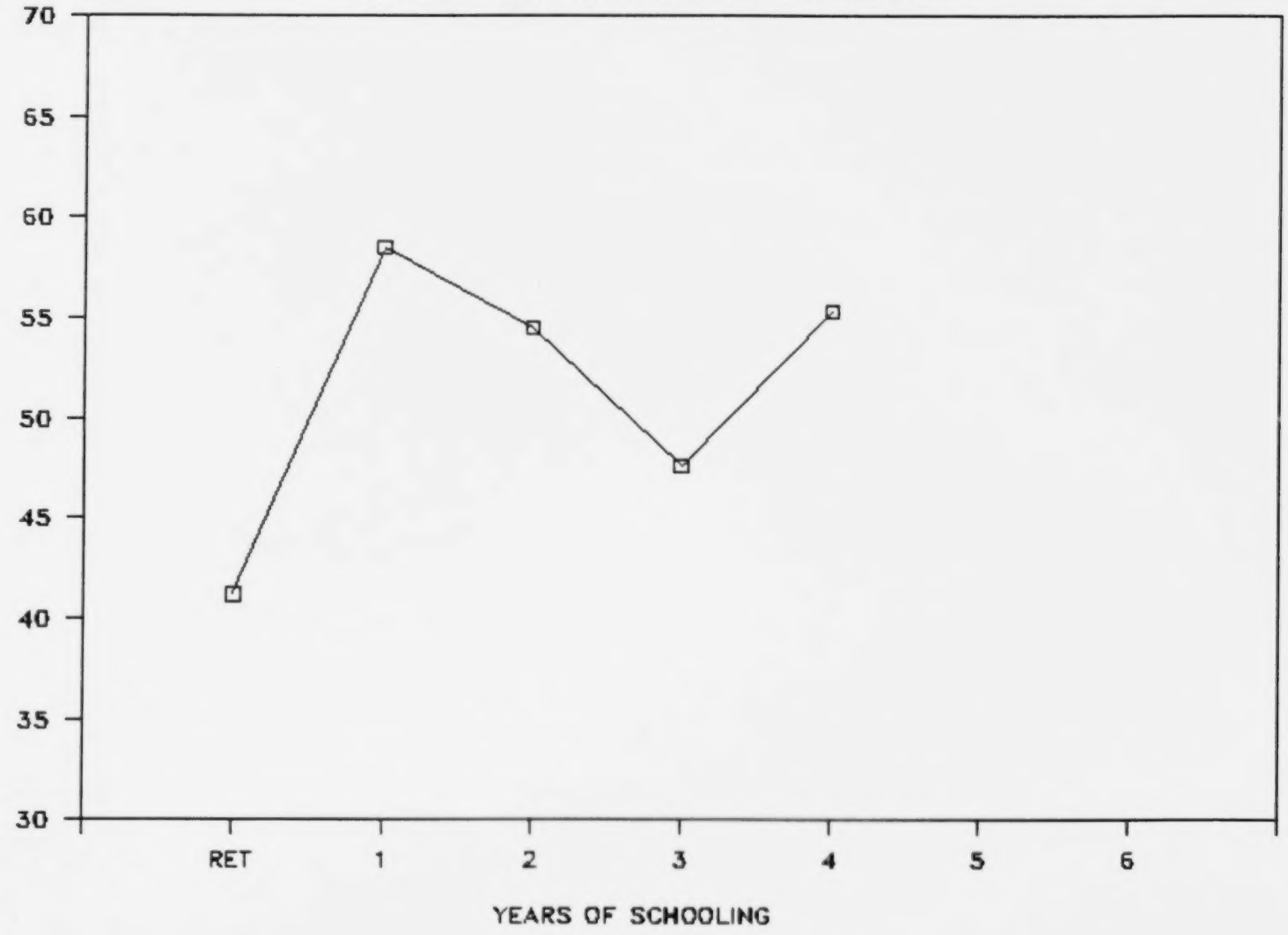
TOTAL BATTERY ACHIEVEMENT—SECOND GRADE



GRAPH III

ACHIEVEMENT OF RETAINED STUDENTS

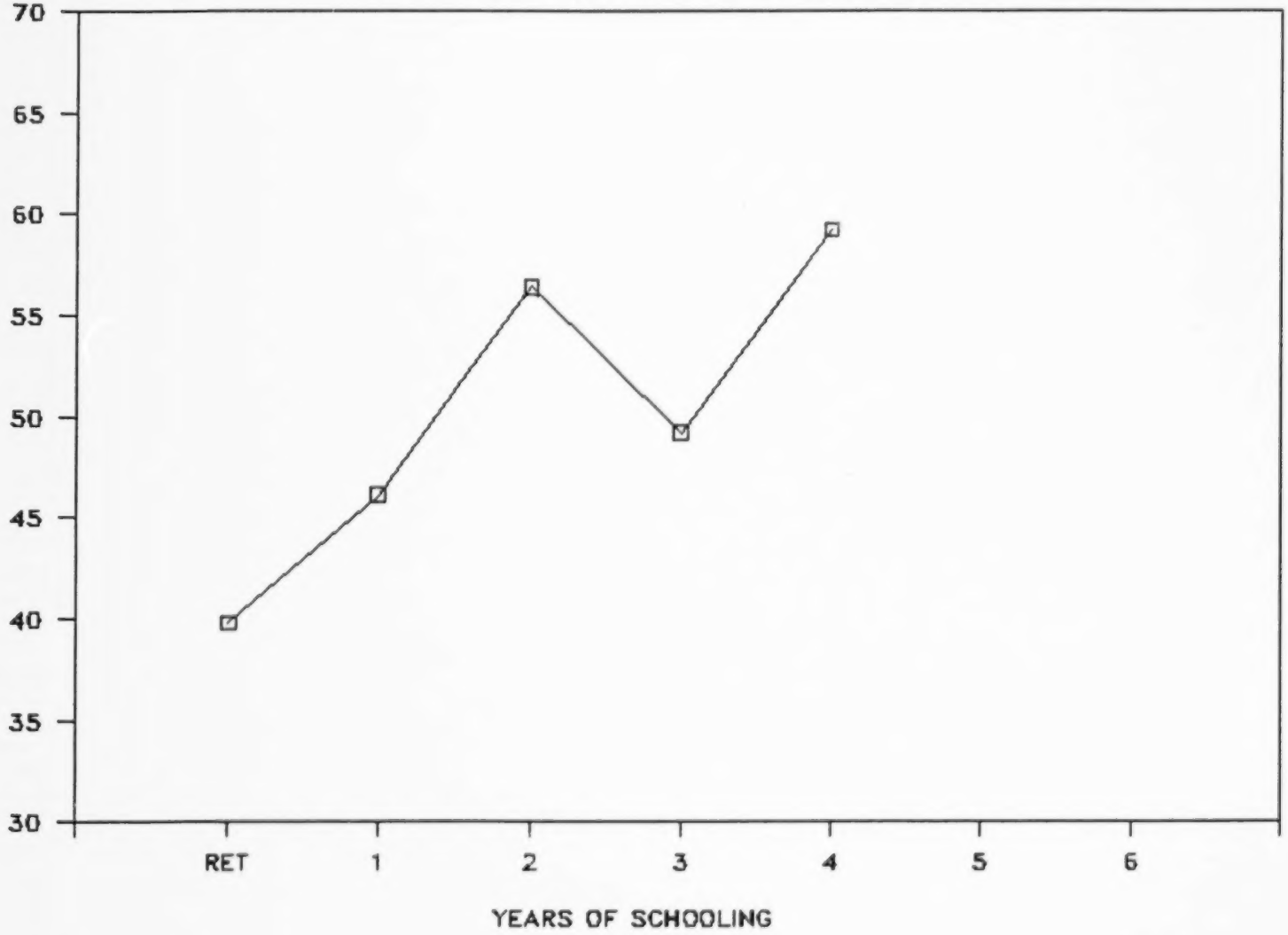
TOTAL BATTERY ACHIEVEMENT—THIRD GRADE



GRAPH IV

ACHIEVEMENT OF RETAINED STUDENTS

TOTAL BATTERY ACHIEVEMENT—FOURTH GRADE



GRAPH V

TABLE IV

COOR ISD RETENTION STUDIES
ACHIEVEMENT OF RETAINED STUDENTS BY GRADE
CALIFORNIA ACHIEVEMENT TEST
AVERAGE NCE

KINDERGARTEN RETENTIONS
n = 61

	K	KR	1	2	3
READING			56.2	51.4	43.7
LANGUAGE				50.5	43.5
MATH			57.4	49.7	49.4
BATTERY			56.8	50.5	45.5

TABLE V

COOR ISD RETENTION STUDIES

STUDENTS IN HIGH SCHOOL WHO HAVE BEEN RETAINED
1986 GRADES 9 - 11

9th GRADERS EXCLUDED GROM GPA AVERAGES

n = 67
RETENTIONS = 80

GRADE RETAINED	n	SPECIAL ED	CHAPTER PROGRAMS	GPA	
K	11	2	7	1.46	
1	18	2	10	1.54	
2	16	6	8	1.58	
3	6	1	3	1.54	
4	4	0	3	1.18	
5	8	2	4	1.45	
6	0	0	0		
7	3	0	1	1.38	
8	14	3	11	1.38	
SUM	80	16	47	1.53	
DOUBLE RETENTIONS	13	1	10	1.36	(11 MALES
MALES	45	12	23	1.59	
FEMALES	22	4	14	1.41	

TABLE VI

COOR RETENTION STUDIES

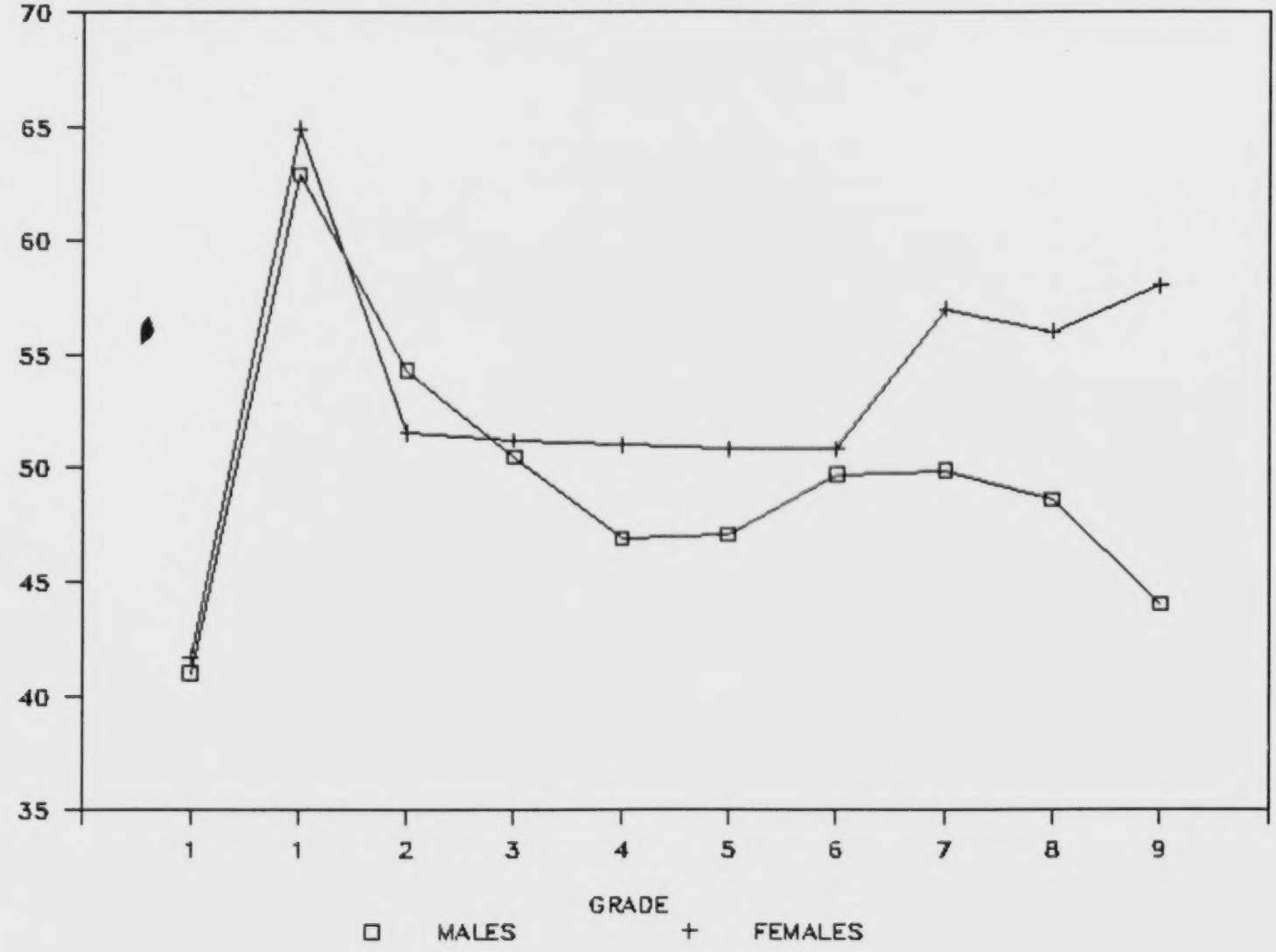
READING ACHIEVEMENT - FIRST GRADE RETENTIONS

BY SEX AND YEARS AFTER RETENTION
1978 TO 1988

AVERAGE NCE	MALES		FEMALES		TOTAL	
	AVG	n	AVG	n	AVG	n
RETENTION	41.0	51	41.7	32	41.2	83
REPEAT FIRST	62.9	54	64.9	30	63.6	84
2nd GRADE	54.3	58	51.6	36	53.3	94
3rd GRADE	50.5	55	51.2	31	50.7	86
4th GRADE	46.9	46	51.0	29	48.5	75
5th GRADE	47.1	33	50.8	21	48.5	54
6th GRADE	49.7	26	50.8	18	50.1	44
7th GRADE	49.9	21	57.0	13	52.6	34
8th GRADE	48.6	20	56.0	10	51.1	30
9th GRADE	44.0	6	58.0	3	48.7	9

ACHIEVEMENT – RETAINED FIRST GRADERS

AVERAGE READING SCORES BY SEX



GRAPH VI

TABLE VII

COOR ISD RETENTION STUDIES

MATHEMATICS ACHIEVEMENT - FIRST GRADE RETENTIONS

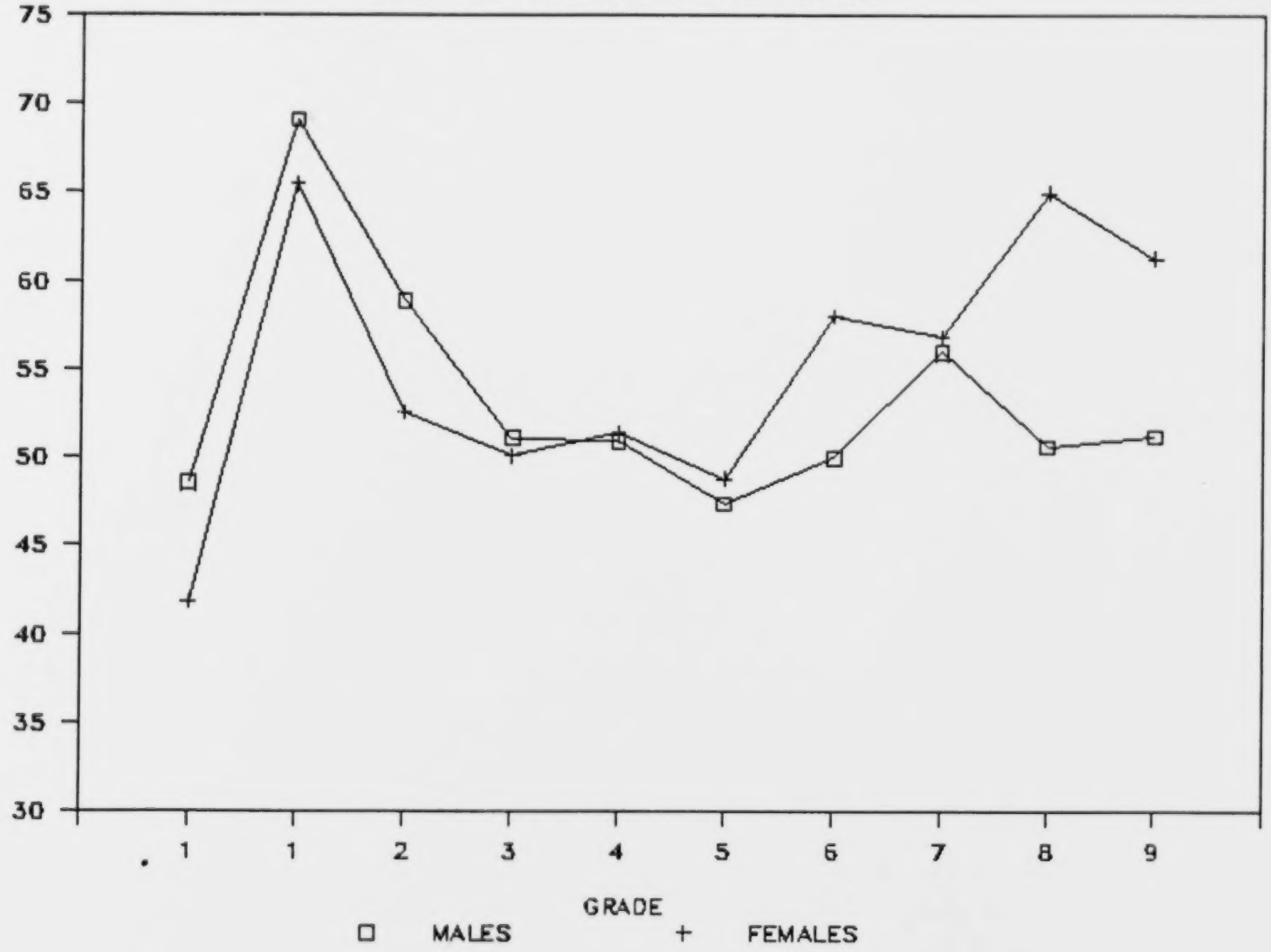
BY SEX AND YEARS AFTER RETENTION

AVERAGE NCE

	MALE		FEMALE		TOTAL	
	AVG	n	AVG	n	AVG	n
RETENTION	48.6	51	48.1	32	44.9	83
REPEAT FIRST	69.1	54	65.5	30	67.8	84
2nd GRADE	58.9	58	52.6	36	56.5	94
3rd GRADE	51.1	56	50.1	31	50.7	87
4th GRADE	50.9	47	51.4	30	51.1	77
5th GRADE	47.4	34	48.8	22	48.1	56
6th GRADE	50.0	27	58.0	18	53.2	45
7th GRADE	56.0	22	56.8	13	56.3	35
8th GRADE	50.6	20	65.0	10	55.4	30
9th GRADE	51.2	4	61.3	3	55.6	7

ACHIEVEMENT – RETAINED FIRST GRADERS

AVERAGE MATHEMATICS SCORES BY SEX



GRAPH VII

TABLE VIII

COOR ISD RETENTION STUDIES
COMPARITIVE ACHIEVEMENT
CALIFORNIA ACHIEVEMENT TEST

STUDENTS BELOW 50 NCE IN READING
NEVER RETAINED
FIRST GRADE 1980 TO 1986

n = 111

	GRADE						
	1	2	3	4	5	6	7
READING	39.8	47.7	56.8	53.8	56.1	58.0	56.1
LANGUAGE		47.5	61.4	54.2	59.1	58.9	62.9
MATH	46.5	50.3	56.0	51.8	49.2	56.0	51.9
BATTERY	43.2	48.5	58.1	53.3	54.8	57.6	57.0

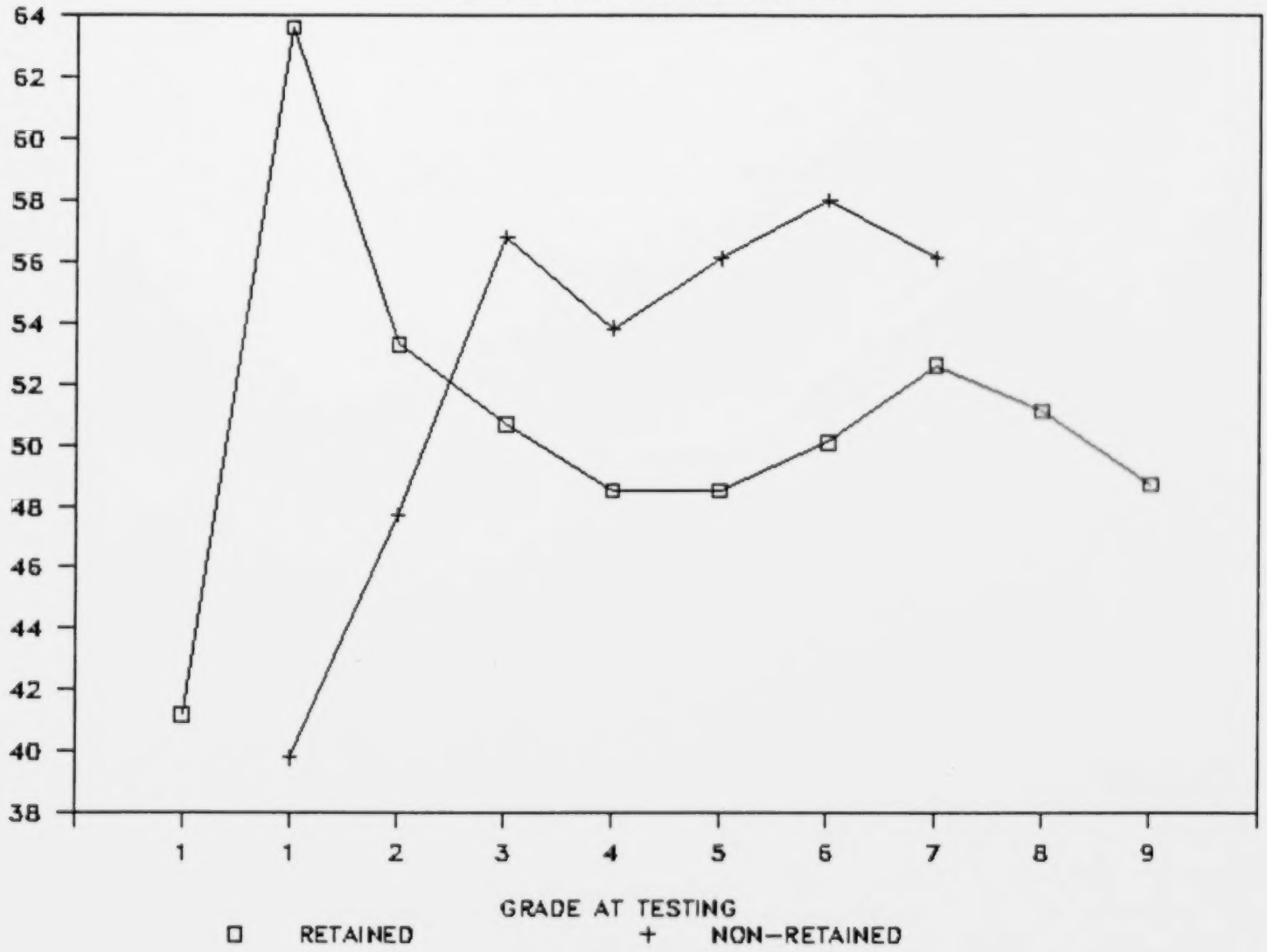
STUDENTS RETAINED IN FIRST GRADE
1978 TO 1986
NCE

n = 110

	GRADE									
	1	1	2	3	4	5	6	7	8	9
READING	41.2	63.6	53.3	50.7	48.5	48.5	50.1	52.6	51.1	48.7
LANGUAGE			55.2	52.0	49.4	48.6	53.4	52.5	49.9	46.4
MATH	44.9	67.8	56.5	50.7	51.1	48.1	53.2	56.3	55.4	55.6
BATTERY	43.1	65.7	55.0	51.1	49.7	48.4	52.2	53.8	52.1	50.2

RETAINED VRS NON-RETAINED FIRST GRADERS

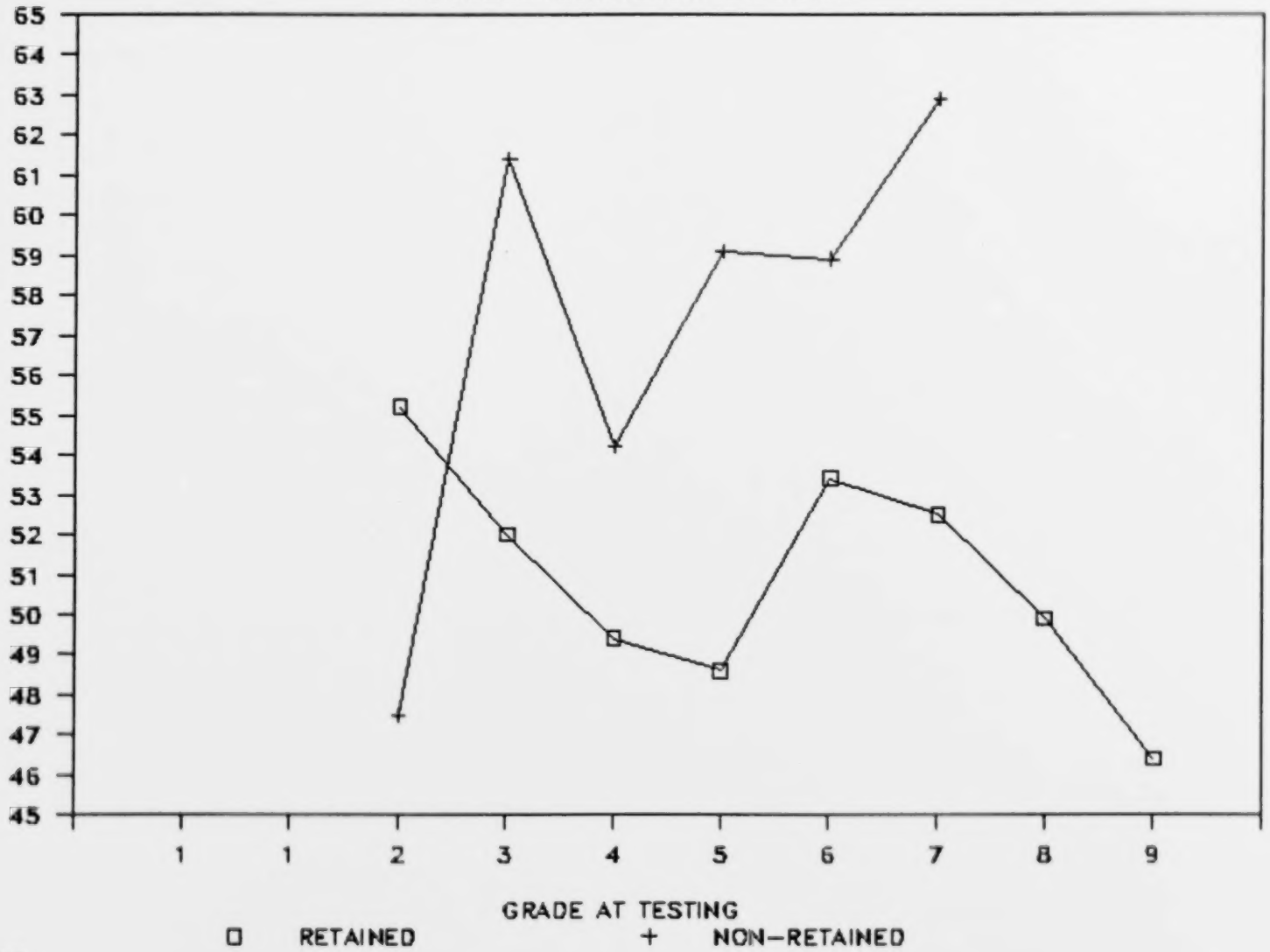
READING ACHIEVEMENT BY GRADE



GRAPH VIII

RETAINED VRS NON-RETAINED FIRST GRADERS

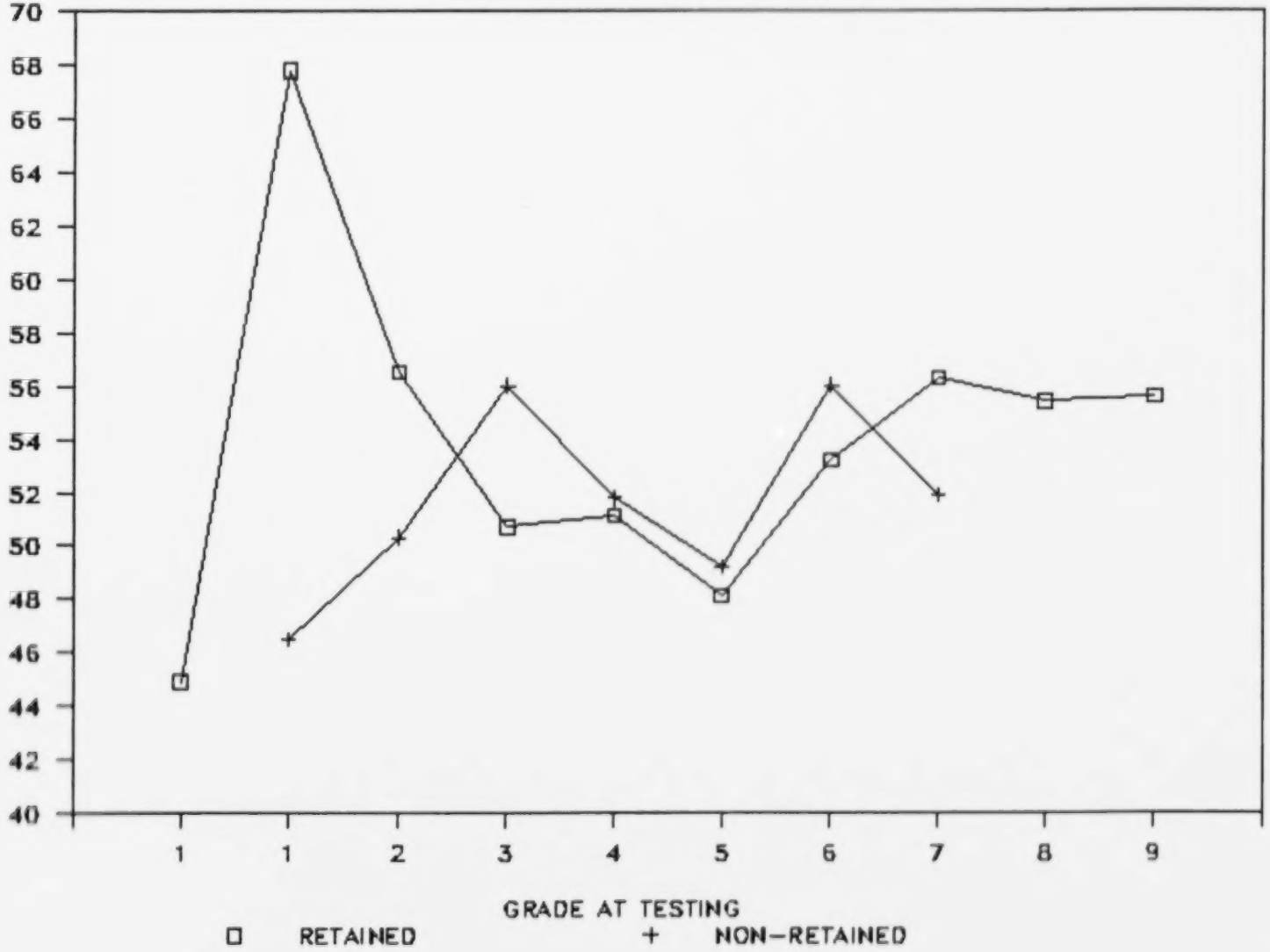
LANGUAGE ACHIEVEMENT BY GRADE



GRAPH IX

RETAINED VRS NON-RETAINED FIRST GRADERS

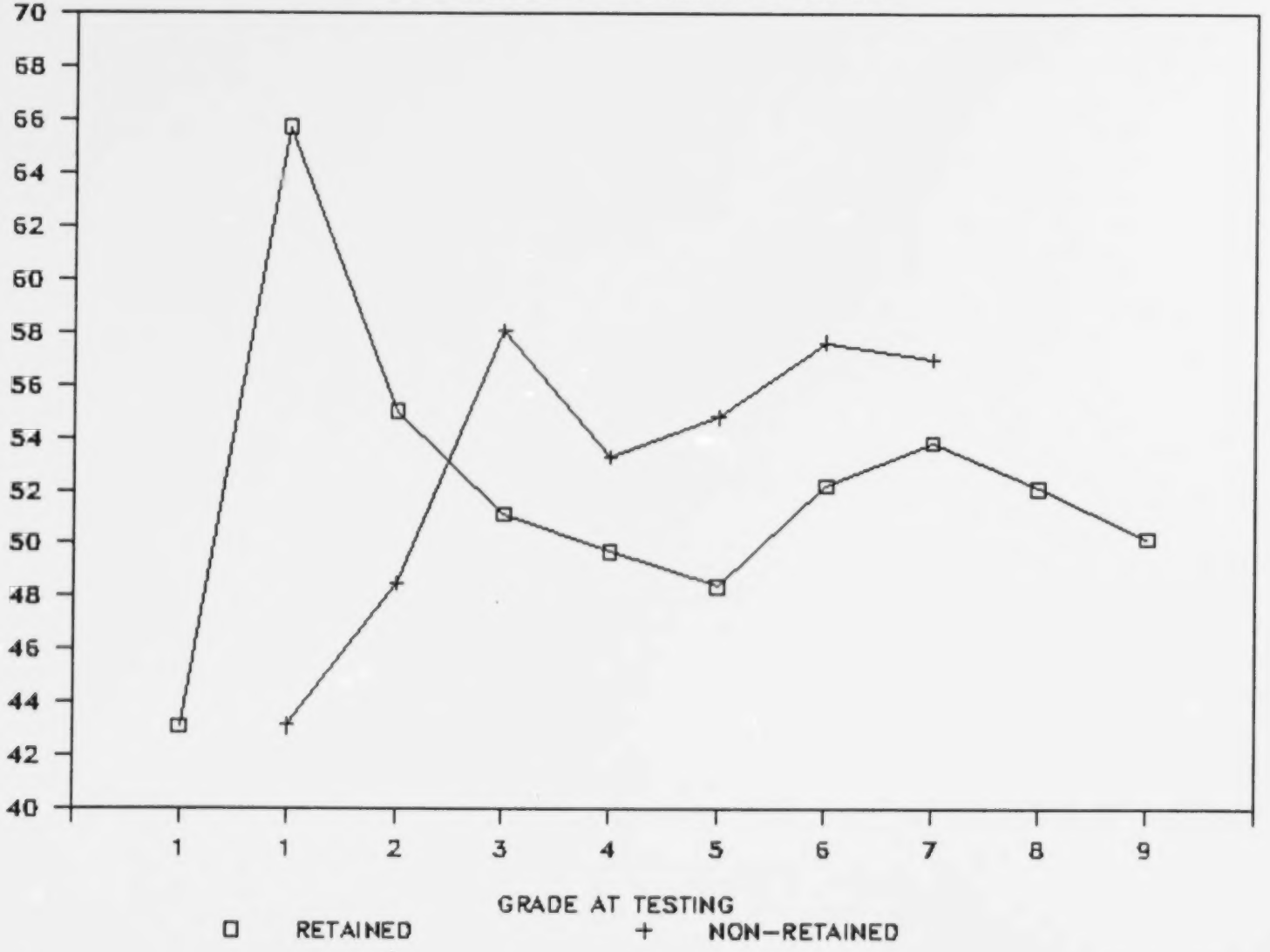
MATHEMATICS ACHIEVEMENT BY GRADE



GRAPH X

RETAINED VRS NON-RETAINED FIRST GRADERS

TOTAL BATTERY ACHIEVEMENT BY GRADE



GRAPH XI

TABLE IX

COOR ISD RETENTION STUDIES

RETENTIONS AND FREE/REDUCED LUNCH
1986

	TOTAL POPULATION				RETAINED STUDENTS			
	TOTAL POP	FREE LUNCH	REDUCED LUNCH	% POP F/R	NUMBER	FREE LUNCH	REDUCED LUNCH	%POP F/R
SCHOOL 1 K-4	671	241	27	39.9	81	38	5	53.1
SCHOOL 2 K-8	298	94	16	36.9	19	12	2	73.7
SCHOOL 3 5-8	483	152	32	38.1	71	23	3	36.6
TOTAL	1452	487	75	38.7	171	73	10	48.5